

RESPONSE UNDER 37 C.F.R. §1.111
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inks contains a betaine compound and a soluble dye and wherein the at least one ink contains a surfactant other than the betaine compound. The ink set of the present invention can effectively prevent blotting of ink by providing an ink containing a betaine compound and a soluble dye.

The Examiner refers to various portions of Smith et al by paragraph number, and concludes that Smith et al anticipate the present claims.

In particular, the Examiner refers to paragraphs [0044], [0045], [0049], [0126] and [0127].

Smith et al disclose an ink jet printing process. In paragraphs [0044], [0045] and [0049], Smith et al disclose that a developing composition, an oxidizing composition, three different coloring compositions and a fixing composition can be employed.

With respect to betaines, Smith et al disclose in paragraph [0126] that the liquid vehicle of his various ink compositions can contain solely water, or can comprise a mixture of water and a water soluble or water miscible organic compound. Among the many different organic compounds that Smith et al disclose in paragraph [0126], a betaine is mentioned as one of the water soluble or water miscible materials.

In paragraph [0127], Smith et al disclose that, as an optional additive, one or more surfactants or wetting agents can be added to the inks.

Smith et al do not contain any working Example of a composition containing a betaine compound, and do not show any working Example of a composition that contains a betaine compound and a surfactant other than the betaine compound.

Accordingly, applicants submit that Smith et al do not contain any working Example which employs the combination of a betaine compound and a water soluble dye, or the

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combination of a betaine compound, a water soluble dye and a surfactant other than a betaine compound.

In view of the above, applicants submit that Smith et al do not disclose or render obvious the subject matter of claims 1 and 6 to 11 and 13 and, accordingly, request withdrawal of this rejection.

Claims 2-5 have been rejected under 35 U.S.C. § 103(a) as obvious over Smith et al in view of EP '272 to Ma et al.

Applicants submit that Smith et al and EP '272 do not disclose or render obvious the subject matter of claims 2 to 5 and, accordingly, request withdrawal of this rejection.

Claims 2 to 5 depend from claim 1. Accordingly, applicants submit that they are patentable over Smith et al for the same reasons as set forth above in connection with the rejection of claim 1 over Smith et al.

The Examiner argues that Smith et al do not disclose the use a betaine having the formula recited in the present claims in an ink composition. The Examiner argues that it would have been obvious to incorporate the betaine surfactant of EP '272 as the betaine compound employed in Smith et al, in order to have a mottle free and smear resistant printed page.

EP '272 has been cited by the Examiner in previous Office Actions. As previously discussed, EP '272 does not disclose the use of a soluble dye in combination with a betaine. The dye disclosed in EP '272 is an insoluble dye. Accordingly, EP '272 does not supply the deficiencies of Smith et al with respect to the combination of a betaine compound with a water soluble dye and a surfactant that is not a betaine compound.

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In particular, the ink according to the invention of EP '272 is characterized in that an insoluble colorant is used in the ink. See page 2, paragraph [0004] and page 3, paragraphs [0011] to [0016] of EP '272. Further, although EP '272 states that a betaine can be used as a surfactant in a colored ink containing an insoluble colorant, EP '272 does not contain a specific working Example showing the use of a betaine. Examples 4 and 5 of EP '572 employed a Basic Violet 11 dye and Example 6 employed an anionic dye Acid Red 52. These dyes are water-soluble. However, a betaine compound is not used in Examples 4, 5 and 6 of EP '272, and the water-soluble dyes are merely used in addition to the insoluble colorant. As mentioned above, EP '272 does not disclose a specific working Example showing the use of a betaine compound. Thus, EP '272 does not supply the deficiencies of Smith et al.

In view of the above, applicants submit that Smith et al and EP '272 do not disclose or render obvious the subject matter of claims 2 to 5 and, accordingly, request withdrawal of this rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.


Respectfully submitted,

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